Appendix 12.1 Geophysical Survey Report

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Knockanarragh Wind Farm

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ACS

Report on Geophysical Survey at Galboystown, Co. Meath

Detection Device Licence No.: 23R0096

Donald Murphy

22 March 2023

ITM: 664222, 769200

RMP No.: ME023-010 - Ringfort

ACSU Ref.: 2313

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PROJECT DETAILS

Project	Geophysical Survey at Galboystown, Co. Meath
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Townland(s)	Galboystown
RMP/SMR No.	(ME023-010) – Ringfort
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NON-TECHNICAL SUMMARY

This report details the results of a Geophysical Survey carried out at Galboystown, Co. Meath (ITM 664222, 769200). The survey was carried out at the request of the client at a pre-planning stage to support a planning application. The site consists of three pasture fields, adjacent to and north of the Killallon road, and west of Clonmellon village, Co. Westmeath.

One monument, a ringfort - rath (ME023-010) listed in the Record of Monuments and Places, is located within the southwest extent of the site. The monument has surface expression, it was depicted as Fort on the 1835 map, with hachures on the 1910 map, and is clearly visible on examined aerial imagery. It consists of a raised subcircular area surrounded by two earthen banks separated by a fosse, with an indication of a third outer bank now incorporated in the field bank. The entrance facing east-southeast, measuring 10m was recorded. The east portion of the monument's interior was subject to quarrying, with quarry pits noted in the SMR file. There are no Protected Structures located within the site as listed in the Meath County Development Plan 2021-2027. The nearest Protected Structure to the site is located in Co. Westmeath, in Clonmellon town and is listed in Westmeath County Development Plan 2021-2027 as a water pump (RPS No. 009-001) also registered in the National Inventory of Architectural Heritage (NIAH Reg. No. 15306001), located c. 0.54m to the southwest.

The geophysical survey was conducted on the 10th and 13th of March 2023 by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd (ACSU), under licence 23R0096 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer cart system.

The geophysical survey was successful in identifying a previously unrecorded archaeological monument, an anomaly representing an annex (Anomaly X) associated with the ringfort – rath (ME023-010). The anomaly takes the form of a U-shaped enclosure adjacent to and southeast of the existing monument. An array of anomalies (?Archaeology) that could represent spreads, pits and/or structures were recorded within it, and these are likely archaeological in nature due to their location. To the east, a concentration of anomalies (?Archaeology), including linears were documented; these could represent ditches, pits and spreads. Linear anomalies of agricultural nature (?Cultivation) were recorded, these are east-west and north-south aligned.

It is recommended that a buffer zone of 20m is established around the ringfort (monument ME023-010) and the remaining part of the site is subject to test trenching, targeting anomalies of potential archaeological significance (?Archaeology), particularly the concentration of anomalies in the south field, to the east of the enclosure including the annex ditch and linears (Anomalies 1, 2a, 2b). This shall be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. Archaeological material identified in the course of the test trenching may necessitate further mitigation, including preservation in situ/or preservation by record (excavation) following discussion with the National Monuments Service.

CONTENTS

1. INTRODUCTION ..... - 1 -
2. ARCHAEOLOGICAL CONDITION ..... - 1 -
3. METHODOLOGY ..... - 1 -
4. SURVEY OBJECTIVES ..... - 1 -
5. SOILS, GEOLOGY & TOPOGRAPHY ..... - 1 -
6. ARCHAEOLOGICAL ASSESSMENT ..... - 1 -
6.1 Archaeological & Historical Background ..... - 1 -
6.2 Previous Archaeological Investigations ..... - 3 -
6.3 Recorded Monuments ..... - 4 -
6.4 Protected Structures and National Inventory of Architectural Heritage ..... - 5 -
6.5 Finds listed within the Topographical Files of the National Museum of Ireland ..... - 5 -
6.6 Cartographical evidence ..... - 5 -
6.7 Aerial photography ..... - 5 -
7. METHOD OF DATA INTERPRETATION ..... - 6 -
8. SURVEY RESULTS ..... - 6 -
9. CONCLUSIONS & RECOMMENDATIONS ..... - 7 -
10. REFERENCES ..... - 8 -
Appendix 1 - Summary Technical Information & Glossary of Terms ..... - 9 -

List of Tables

Table 1 Previous archaeological investigations in the environs of the site

Table 2 Recorded Monuments in the environs of the site

Table 3 Geophysical survey results

List of Figures

Figure 1 Location of site.

Figure 2 Location of site, previous archaeological investigations and nearby Sites and Monuments Record sites

Figure 3 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1835 - published 1837), showing location of site

Figure 4 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1910 - published 1912), showing location of site

Figure 5 Aerial view of site, showing geophysical survey results (greyscale image)

Figure 6 Aerial view of site, showing geophysical survey interpretation

1. INTRODUCTION

This report details the results of a Geophysical Survey carried out on a site at Galboystown, Co. Meath (ITM 664222, 769200, Figures 1-2). The site is almost square in shape and consists of three pasture fields adjacent to and north of the Killallon road, and west of Clonmellon village, Co. Westmeath.

A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer cart system. The geophysical survey was conducted on the 10th and 13th of March 2023 by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd (ACSU), under licence 23R0096 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

2. ARCHAEOLOGICAL CONDITION

The geophysical survey was carried out at the request of the client to assess the archaeological potential of the site, inform the planning process, and support a planning application.

3. METHODOLOGY

A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer system, mounted on a non-magnetic cart. A detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas within the site of the proposed development with variations in the magnetic field between -100nT to +107.834nT (see also Section 7 and Appendix 1).

4. SURVEY OBJECTIVES

The survey aimed to establish the presence of any archaeological features within this site and to assist in determining the extent of subsurface archaeological features present on the site that could be associated with monument (ME023-010), in order to inform a future programme of test trenching.

5. SOILS, GEOLOGY & TOPOGRAPHY

The area subject to geophysical survey consists of three green fields. The site has an elevation of c. 94-99m Ordnance Datum (OD). The underlying geology of the site consists of dark limestone and shale and is part of the Lucan formation. This bedrock geology is overlaid by deep, well-drained, mineral soils. (Geological Survey of Ireland).

6. ARCHAEOLOGICAL ASSESSMENT

6.1 Archaeological & Historical Background

The site is located within the townland Galboystown in the Civil Parish of Killallon and Barony of Fore. Galboystown can be translated as Baile na ngall buídhe, 'town of the yellow English'. It was mentioned in 1618 in relation to the pardon of alienation to Chris/ Lord Killeen and Janet his wife. It was depicted as Gallboys towne on the Down Survey map and by 1667 as a part of Lancelot Stands esq with the remaining portion belonging to James Napper esq. (www.logainm.ie). There

are four monuments located in the townland of Galboystown – three ringfort raths (ME022-029, ME023-009, ME023-010) and a moated site (ME023-011). The only monument shown on the 1835 map is ME023-010, but the 1910 map indicates them all with hachures, but labels moated site (ME023-011) as a quarry.

Clonmellon to the east of the site is described as a market and post town. Lewis (1837) described it as a neat little town with a parish church with a spire dedicated to St. Lucy, a dispensary and a parochial school built by Sir T. Chapman.

Enclosures and ringfort-raths

Ditched enclosures are seen in the form of ringforts and non-circular enclosures. The ringfort, as the name suggests, implies a circular enclosure with a minimum of one ditch and possible accompanying banks. They were generally circular, measuring c. 24–60 metres in diameter. Early Irish laws stated that circularity was a feature of the model ringfort (Stout 1997). With the increase of archaeological excavations as a result of development, however, more and more non-circular enclosures are coming to light. Therefore, for the purpose of this discussion, all enclosures will be included in the category of 'ditched enclosures'.

The majority of early medieval ditched enclosures date to the sixth–ninth centuries AD, and we see a significant decline in their use in the tenth century (O'Sullivan & Nicholl 2010). Though a site in Laytown, Co. Meath, could have a fourth century date (McConway 2002), other sites such as Ballynacarriga, Co. Cork (Noonan 2004) and Raystown, Co. Meath (Seaver 2005; 2016) were probably occupied from the fifth century well into the eleventh century.

Ditched enclosures are generally regarded as enclosed farmsteads, and the defences are thought to have been built to protect against cattle raids (Stout 1997). Some have provided little evidence for structures, suggesting the enclosure was used for storing cattle, known as a bodun, though the majority provide evidence to suggest they were inhabited settlements with houses, farmyards, outbuildings, and animals (O'Sullivan & Nicholl 2010). Excavated items retrieved from ringforts are lagely of a domestic, craft or agricultural nature (Monk 1995). Some larger sites, such as Raystown, Co Meath, fulfilled many functions; there was evidence for animal husbandry, cereal and grain processing, milling, burial and metallurgy (Seaver 2016).

Ditched enclosures are one of the commonest field monument in Ireland. The majority of ditched enclosures were univallate with one bank and fosse. In many cases, the banks do not survive. There are, however, bivallate enclosures, for example, Cloonaboy, Co. Mayo (Gillespie 2010), and multivallate enclosures, such as Garranes, Co. Cork (Ó Ríordáin 1942). As mentioned above, while ringforts were generally 24–60 metres in diameter, most non-circular enclosures were between 50 and 70 metres in diameter. Ditched enclosures tend to be situated on sloping or well-drained hilly ground with good views (Stout 1997) and they are also usually found in clusters within a townland (Edwards 1990). Evidence from excavations shows that enclosing ditches were, in some cases, allowed to silt up and had refuse deliberately dumped into them. Layers of slag were dumped into the ditch at Lisleagh, Co. Cork (Monk 1995).

Ditched enclosures usually have an entrance at the southeast. This is to avoid the prevailing cold, westerly and northerly winds that the enclosure would be exposed to (Stout 1997). The entrance passage at Rath II, Ballypalady, Co. Antrim,

ranged from 0.76m at the outer end to 1.5m at the inner opening, suggesting it was not intended for keeping large livestock (O'Sullivan & Nicholl 2010). Many sites, like that at Lissachiggel, Co. Louth, had either cobbles or paving stones providing a dry passage into the enclosure. These entrances were known in early Irish literature and legal sources as the 'airdrocht' and were to be kept clean (ibid.). O'Sullivan and Nicholl (ibid.) wrote that it was not unusual to see pathways laid within the interior to steer movement towards a particular direction and the upon entering the site, a person was often persuaded by laid pathways to move directly and immediately to the house doorway. The pathway was meant to be kept clean and dry, and likely, ditches and gullies would function as drainage features to keep the area dry.

Early medieval houses within ditched enclosures tended to be circular or round, made of stone or post-and -wattle walls. The roofs were thatched with reeds, turf or straw. According to the eight-century law text Críth Gablach, a typical farmer's house was 6–8 metres in diameter. Archaeological evidence shows that the majority were 4–5 metres in diameter, and some were significantly larger, at 6–10 metres (O'Sullivan & Nicholl 2010). As pointed out by McCormick et al. (2011), because of the basket-like construction, any recuts or changes to the early medieval houses are rarely seen in the archaeological record. It was likely that the lifespan of a medieval house would have lasted for just a short period of time (20 to 30 years); with good maintenance, however, a house could have stood for 50 to 60 years (O'Sullivan & Nicholl 2010).

Associated with many enclosures and often found in their environs are fire pits, storage pits, refuse pits, cooking pits and cereal-drying kilns. O'Sullivan and Nicholl (2010) wrote that pits are one of the more enigmatic elements to be found within the enclosure and that their function can be difficult to discern. They suggest that such pits would have been used for a variety of purposes, were probably reused and cleaned-out many times and countless, no doubt, had multiple functions over their lifetime (ibid.). According to McCormick et al. (2011), cereal-drying kilns are generally not associated with ditched enclosures, however, there are several examples of sites with associated kilns, such as Johnstown 1, Co. Meath, Gortygrigane, Co. Tipperary and Camlin, Co. Tipperary.

6.2 Previous Archaeological Investigations

The site has not been subject to archaeological investigations previously and a limited number of archaeological investigations took place in the environs of the site that are listed in the Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie). These include test trenching (06E0684) in Clonmellon village in relation to a residential development with no features identified and investigations at Killallon Churchyard (93E0027). The latter was in relation to an extension and removal of a field fence for access. No features were recorded at the area where the extension was proposed. However, a bank was tested in three places and a low crudely built, unmortared stone wall was exposed. Where best preserved it stood at 0.5m and was 0.45m wide. The feature could not be dated but remains in situ as it was possible to carry out the work without disturbing it.

The details of these investigations, derived from the Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie), are outlined below.

Table 1: Previous archaeological investigations in the environs of the site

Site	Licence No.	Site Type	Investigation type
1993:179 - Killallon Churchyard, Boherard, Meath	93E0027	Graveyard	Test Trenching
2006:2036 - Clonmellon, Westmeath	06E0684	No archaeological significance	Test Trenching

6.3 Recorded Monuments

One monument, a ringfort - rath (ME023-010) listed in the Record of Monuments and Places, is located within the southwest extent of the site. The monument has surface expression, was depicted as Fort on the 1835 map, with hachures on the 1910 map, and is clearly visible on examined aerial imagery. It consists of a raised subcircular area surrounded by two earthen banks separated by a fosse, with an indication of a third outer bank now incorporated in the field bank. The entrance facing east-southeast, measuring 10m was recorded. The east portion of the monument's interior was subject to quarrying, with quarry pits noted in the SMR file.

The following is a list of the monuments located within the site (Figure 2, Table 2) and in the immediate environs listed in the National Monuments Service Archaeological Survey Database (http://maps.archaeology.ie/historicenvironment/).

Table 2: Recorded Monuments in the environs of the site

ME023-010----	**Ringfort - rath**
Situated on a rise in an undulating landscape. This is a raised and grass-covered subcircular area (dims 41m NE-SW; 36m NW-SE) defined by an earthen bank separated by a fosse from an outer earthen bank with some bushes. There are traces of a third bank SW-NW incorporated in a NNE-SSW field bank. The widened entrance through the inner (Wth of base 10m) and outer (Wth of base 10m) banks is at ESE. The E quadrant of the interior has old quarry pits.	
ME023-009----	**Ringfort - rath**
Situated on a rise in a gently undulating landscape. It is depicted only on the 1912 edition of the OS 6-inch map as a hachured feature. This is a circular grass-covered and slightly domed (H 0.3-0.5m) area (diam. 20.5m WNW-ESE; 18m NNW-SSE) defined by the lip of an earthen bank (Wth of base 5-6.7m; int. H 0.1m; ext. H 0.8-1m). There is no visible fosse or entrance but there is a grass-covered quarry on the perimeter at NE. Its visible profile may have eroded away by 2005 (OSAP).	
ME023-011----	**Moated site**
Situated on a rise in a gently undulating low-lying landscape. It is depicted as a circular hachured feature only on the 1912 edition of the OS 6-inch map. This is a rectangular, grass-covered platform (dims 21m NE-SW; 15m NW-SE) with some mature deciduous trees. It is defined by wide, flat-bottomed and partly rock-cut fosses or moats (at NE: Wth of top c. 6m; Wth of base c. 4; int. D 1.3m; ext. D 2m) with low, wide external banks at NE and SE, but the external features are poorly defined at NW and absent at SW where they appear to have been truncated by a NW-SE field wall. There is a wide entrance through the outer bank at SE with a causeway across the fosse.	

6.4 Protected Structures and National Inventory of Architectural Heritage

There are no Protected Structures located within the site as listed in the Meath County Development Plan 2021-2027. The nearest Protected Structure to the site is located in Co. Westmeath, in Clonmellon town and is listed in Westmeath County Development Plan 2021-2027 as a water pump (RPS No. 009-001) also registered in the National Inventory of Architectural Heritage (NIAH Reg. No. 15306001), located c. 0.54m to the southwest.

6.5 Finds listed within the Topographical Files of the National Museum of Ireland

The topographical files of the National Museum of Ireland for the townland of Galboystown were requested and no finds are recorded within the townland.

6.6 Cartographical evidence

A review of available historic mapping for the area was carried out to include the 6-inch 1835 and the 25-inch 1910 editions of the Ordnance Survey maps. Potential archaeological or cultural heritage features are marked on such maps and provide a useful resource in identifying sites particularly if they no longer have any above-ground remains.

Ordnance Survey (OS) maps of the area were examined to identify any possible archaeological features and trace the site's development during the nineteenth and early twentieth centuries. No buildings are depicted on the examined Ordnance Survey mapping. The monument present within the site is labelled as Fort on the 1835 map and indicated by two concentric hatchures on the 1910 map. The site consisted of five fields on the 1835 map, with the west field long and rectangular, bounded by a row of mature trees from the east, and a path from the west. This field was divided into three fields on the 1910 map. A northwest portion of the site boundary is depicted as a wet ditch on the 1910 mapping.

6.7 Aerial photography

Aerial photographs dating between 1995 and 2013 from the Ordnance Survey of Ireland were also reviewed, in addition google map pro imagery dating from 2013-2022 was examined.

By the 1995 aerial, the west portion of the monuments bank appears to be overgrown, with shrubs and trees dotting its east extent. A pylon is depicted within the centre of the site. Only some of the field boundaries can be seen as trees or shrubs; others are seen and might be modern fencing or buried wet ditches. A pond is visible within the northern portion of the site, and by the 1999-2003 map, an additional, smaller pond is visible to the east of it. Some ground disturbance at the entrance to the site is apparent from 2004-2006, and it appears a cattle pen was constructed. The 2009 imagery shows linear, east-to-west aligned cropmarks representing agricultural furrows within the western portion of the site. Furthermore, two crop marks, oval in shape, likely indicating wet areas/ponds, can be seen on the 2009 aerial. In 2011 a pylon was replaced and deep tyre ruts/access road that ran just to the east of the monument can be seen. East-to-west aligned furrows within the central portion of the site, and a mixture of east-to-west and north-south-aligned furrows can be seen very clearly on the 2020 aerial.

7. METHOD OF DATA INTERPRETATION

The gradiometer survey was conducted with a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer system. A detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas. This allows the detection of potential archaeological responses. Data was collected using a GPS based non-magnetic cart system with four mounted sensors.

The Bartington GRAD 601-2 instrument is a specifically designed gradiometer for use in archaeological prospection. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.01nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions. The survey is geo-referenced with a Trimble R10 unit accurate to within 1cm. Interpretation of the results was made by examination of the raw data as greyscale images, XY trace, relief, and data plots (see Appendix 1). Archived raw data is presented in Figure 5 and an interpretation is presented in Figure 6.

8. SURVEY RESULTS

The geophysical survey was conducted by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd (ACSU) on the 10th and 13th of March 2023 under licence 23R0096 (Figures 5–6). The site consists of three pasture fields.

The anomalies identified are listed in Table 3 below:

Table 3: Geophysical survey results

Anomaly Ref.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Description
1	Archaeology	Annex Ditch	Portion of a sub-oval annex ditch feature, likely associated with the ringfort - rath (ME023-010) in the southwest portion of Field 1. The monument was not surveyed. There is a field boundary, aligned north-northeast - south-southwest (Anomaly 4) that runs the length of field one, through the sub-oval ditch. This field boundary is depicted on historic OS mapping.
2 & 2a	?Archaeology	Parallel linear features	Two parallel linear ditches within Anomaly 1, annex ditch. These linears both terminate within the annex suggesting they are contemporary and also likely associated with the ringfort (ME023-010).
3	?Archaeology	Sub-oval pit/spread or natural geology	A sub-oval positive anomaly that might indicate the location of a pit, spread or kiln feature. It is located between the two linear features Anomaly 2 & 2a. The possibility that this is of a natural origin cannot be excluded.
4	Linear	Linears, former field boundaries	Linear anomalies representing former field boundaries. These removed field boundaries manifest as wide bands of magnetic interference. These correspond with boundaries depicted on OS mapping.

Anomaly Ref.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Description
-	Cultivation	Cultivation furrows/agricultural furrows	A series of cultivation furrows evident in the centre of Field 1, aligned roughly east-west. These are evident on Google Earth Aerial imagery from 2009 onwards.

9. CONCLUSIONS & RECOMMENDATIONS

The geophysical survey at Galboystown, Co. Meath was carried out in order to assess the archaeological potential of the site. A Recorded Monument, ringfort (ME023-010) is located in the southwestern portion of the site. The monument has surface expression in the form of banks, ditches and a raised central area.

The geophysical survey was successful in identifying a previously unrecorded archaeological monument, an anomaly representing an annex (Anomaly X) associated with the ringfort (ME023-010). The anomaly takes the form of a U-shaped enclosure adjacent to and southeast of the existing monument. An array of anomalies (?Archaeology) that could represent spreads, pits and/or structures was recorded within it, and these are likely to be archaeological in nature due to their location. To the east, a concentration of anomalies (?Archaeology), including linears were documented; these could represent ditches, pits and spreads. Linear anomalies of agricultural nature (?Cultivation) were recorded, these are east-west and north-south aligned.

It is recommended that a buffer zone of 20m is established around the ringfort (monument ME023-010) and the remaining part of the site is subject to test trenching, targeting anomalies of potential archaeological significance (?Archaeology), particularly the concentration of anomalies in the south field, to the east of the enclosure including the annex ditch and linears (Anomalies 1, 2a, 2b). The test trenching is necessary to assess the nature, extent and depth of the geophysical anomalies. This shall be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. Archaeological material identified in the course of the test trenching may necessitate further mitigation, including preservation in situ/or preservation by record (excavation) following discussion with the National Monuments Service.

10. REFERENCES

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Other Sources

Extract from 1st edition Ordnance Survey (OS) 6-inch map

Extract from 3rd edition Ordnance Survey (OS) 25-inch map

Record of Monuments and Places (RMP), the Heritage Service, 7 Ely Place, Dublin 2.

Meath County Development Plan Record of Protected Structures 2021-2027

Westmeath County Development Plan Record of Protected Structures 2021-2027

Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie)

Appendix 1 - Summary Technical Information & Glossary of Terms

Fluxgate Gradiometer Survey is a non-intrusive method of archaeological prospection that is most often used in Irish Archaeology. This method allows for rapidly mapping archaeological objects, structures, deposits and other features, including geological anomalies, that survive beneath the ground. It allows the most rapid ground coverage and records a variety of anomalies caused by human activity and changes in the natural subsoil. The results are presented as a greyscale map of anomalies detected that are interpreted by an experienced archaeologist.

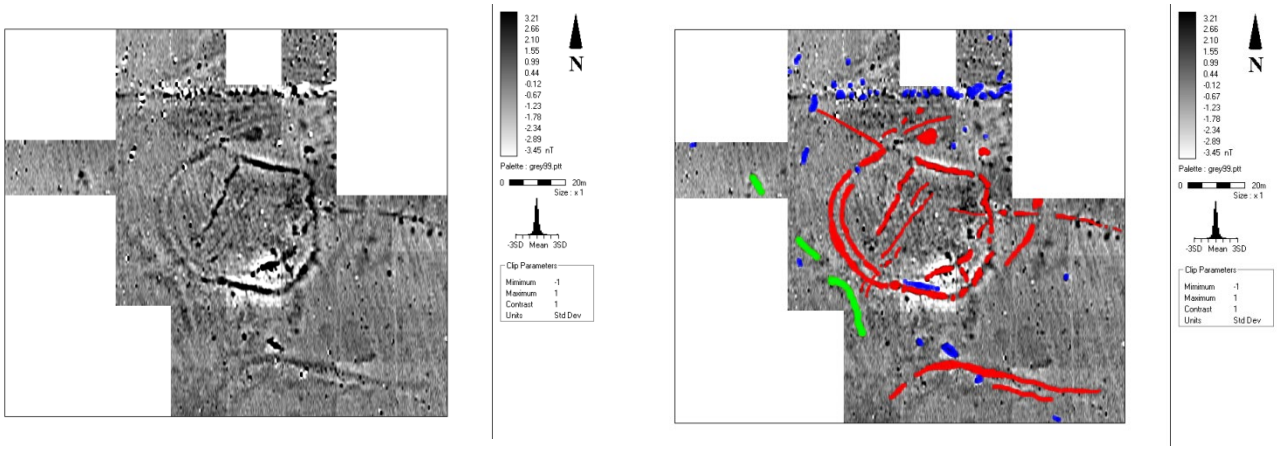
Surveys are undertaken using GPS based lightweight Bartington Grad 601-2 mounted on the Bartington Cart system. Ground cover has to be 0.30m or less. The instrument used is operated by an experienced, skilled geophysical survey technician. The data is collected by hand wheeling the cart over the survey area in evenly spaced parallel transects. The equipment was specifically designed for archaeological prospection. It includes sensors that are highly stable, minimising requirements for excess data processing. The instrument has a vertical 1 m sensor separation permitting finite resolution of buried archaeological features. Surveys can be undertaken in scan or detailed (zig-zag traverse) modes for reconnaissance or high-density mapping. The fluxgate enables reliable flexibility during fieldwork. Frequent realignment of the instruments and zero drift correction ensure a constant high quality of data. These extremely sensitive instruments can detect variations in soil magnetism to 0.1nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions.

The instrument can be employed in both commercial and research-based investigations allowing for the completion of projects within short timescales. Regular grid sample densities from standard 1600 readings to 12800 readings per 20m by 20m grid are permitted. A constant high quality of data is assured by experienced field staff operating in accordance with E*AC Guidelines for the use of Geophysics in Archaeology* (Schmidt et al. 2015) and English Heritage's *Geophysical Survey In Archaeological Field Evaluation* (David et al. 2008).

Bartington Grad 601-2 mounted on Bartington Cart

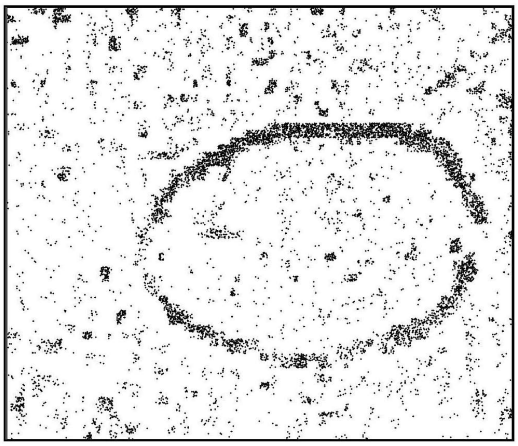
Data Display Format

Greyscale: The greyscale format assigns a cell to each datum according to its location on the grid. The display of each data point is conducted at very fine increments, allowing the full range of values to be displayed within the given data set. This display method also enables the identification of discrete responses that may be at the limits of instrument detection.

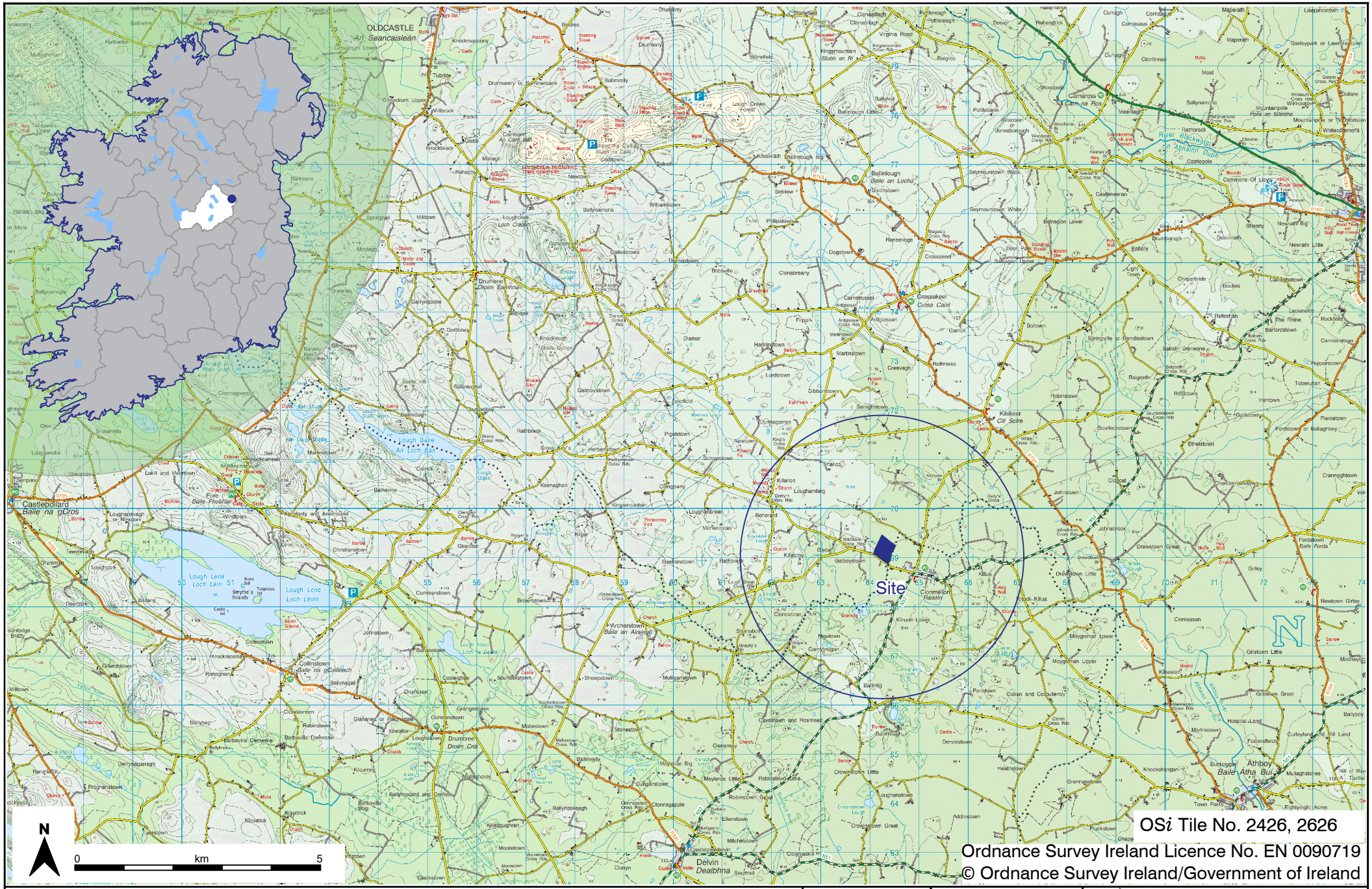


Early medieval enclosure greyscale

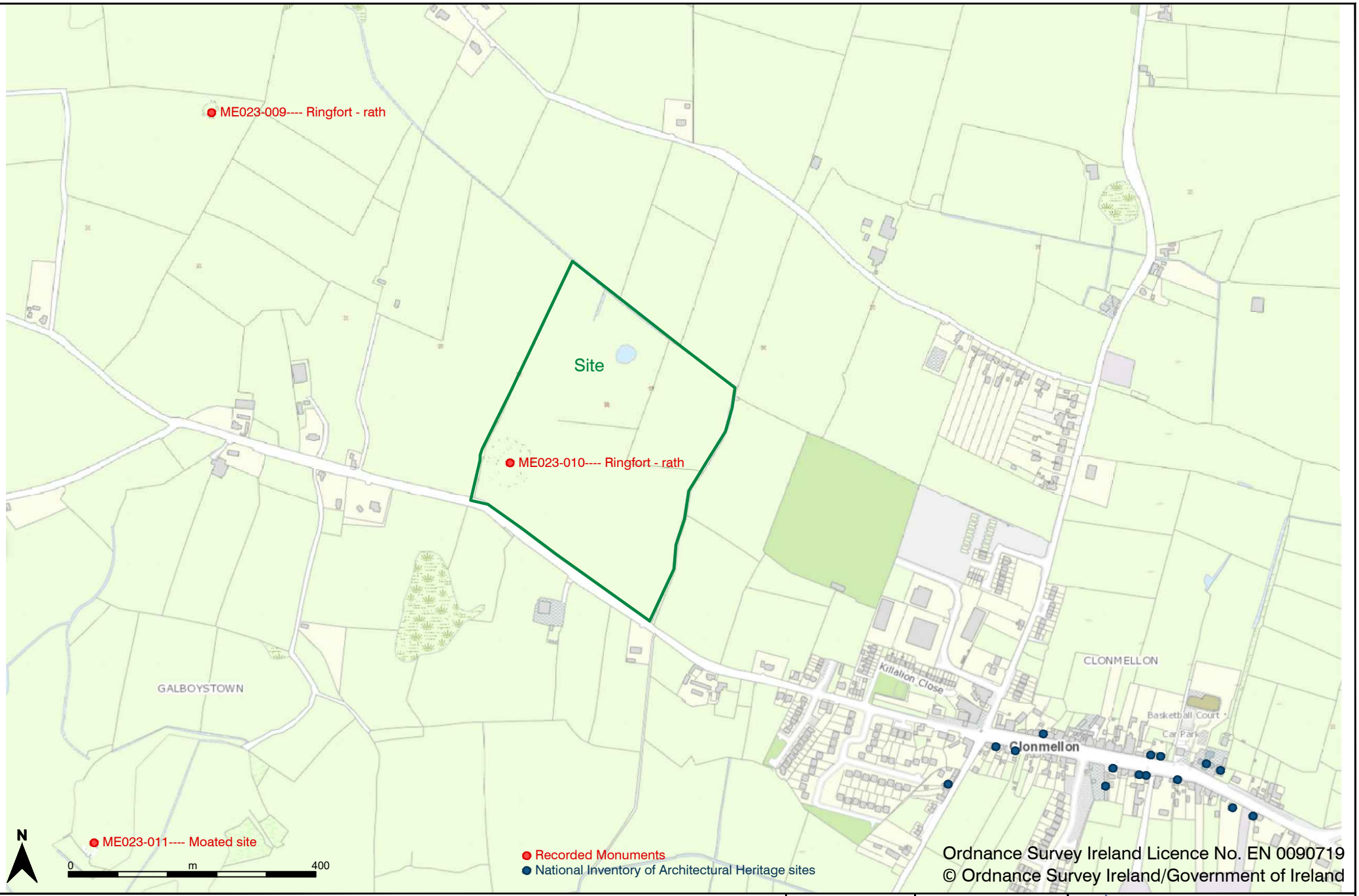
Dot Density Plot : Each datum is assigned a cell in which the intensity or number of dots displayed is proportional to the magnitude of the individual response. The visibility or presentation of responses within a given survey area is governed by numeric parameters specific to both soil morphological and archaeological conditions observed on site. Typically, the range of weak to strong responses is manifested by a low to high level of dot density. The format is useful for displaying gradiometer and resistance data particularly for identifying low-level responses.



Dot Density plot of oval-shaped enclosure

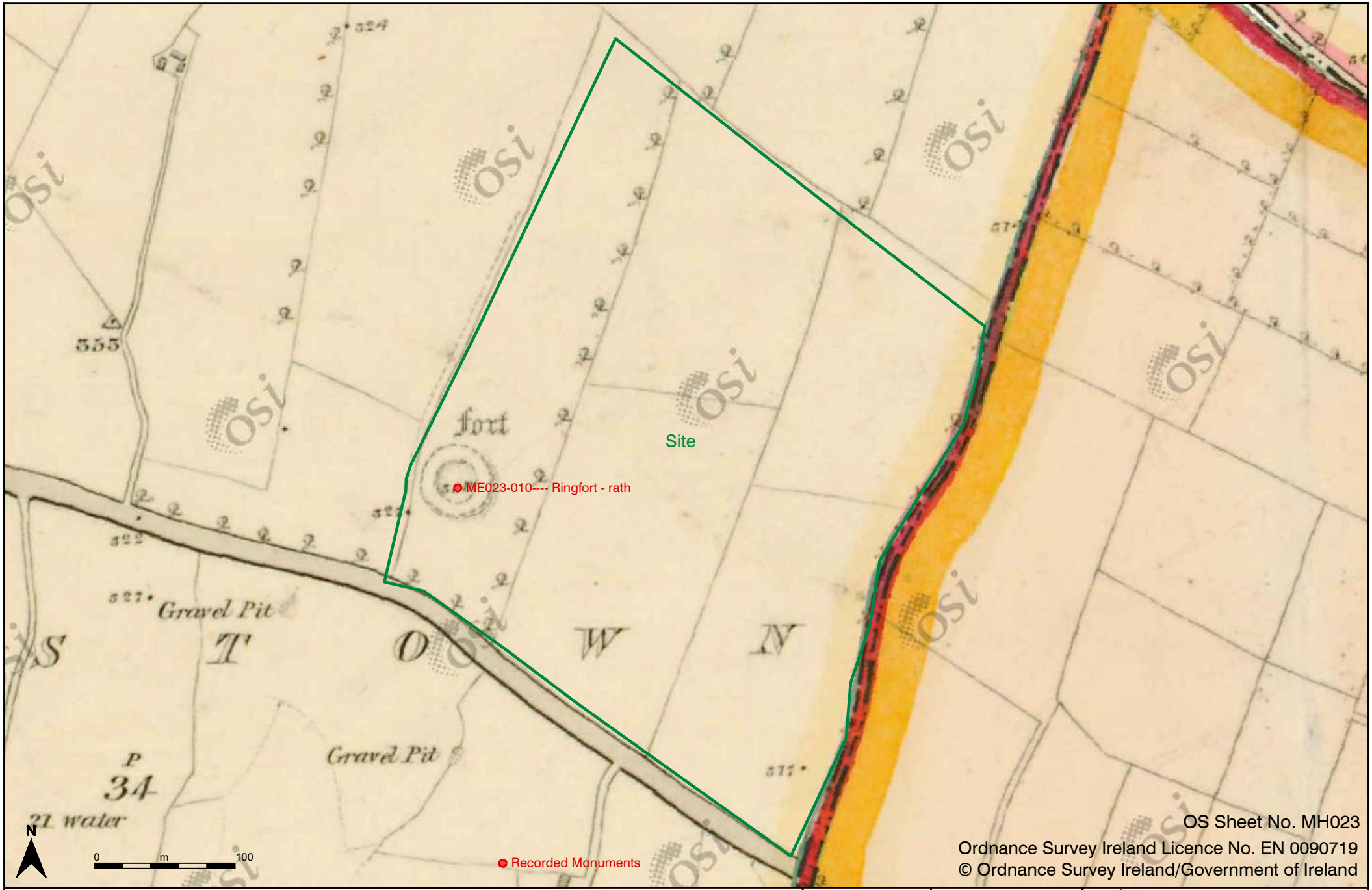


Project Galboystown, Co. Meath	**Date** March 2023	**Drawing No.** 2313_C1001	ARCHAEOLOGICAL CONSULTANCY SERVICES UNIT
Figure 1 Location of site		**Scale** 1:100,000 @ A4	

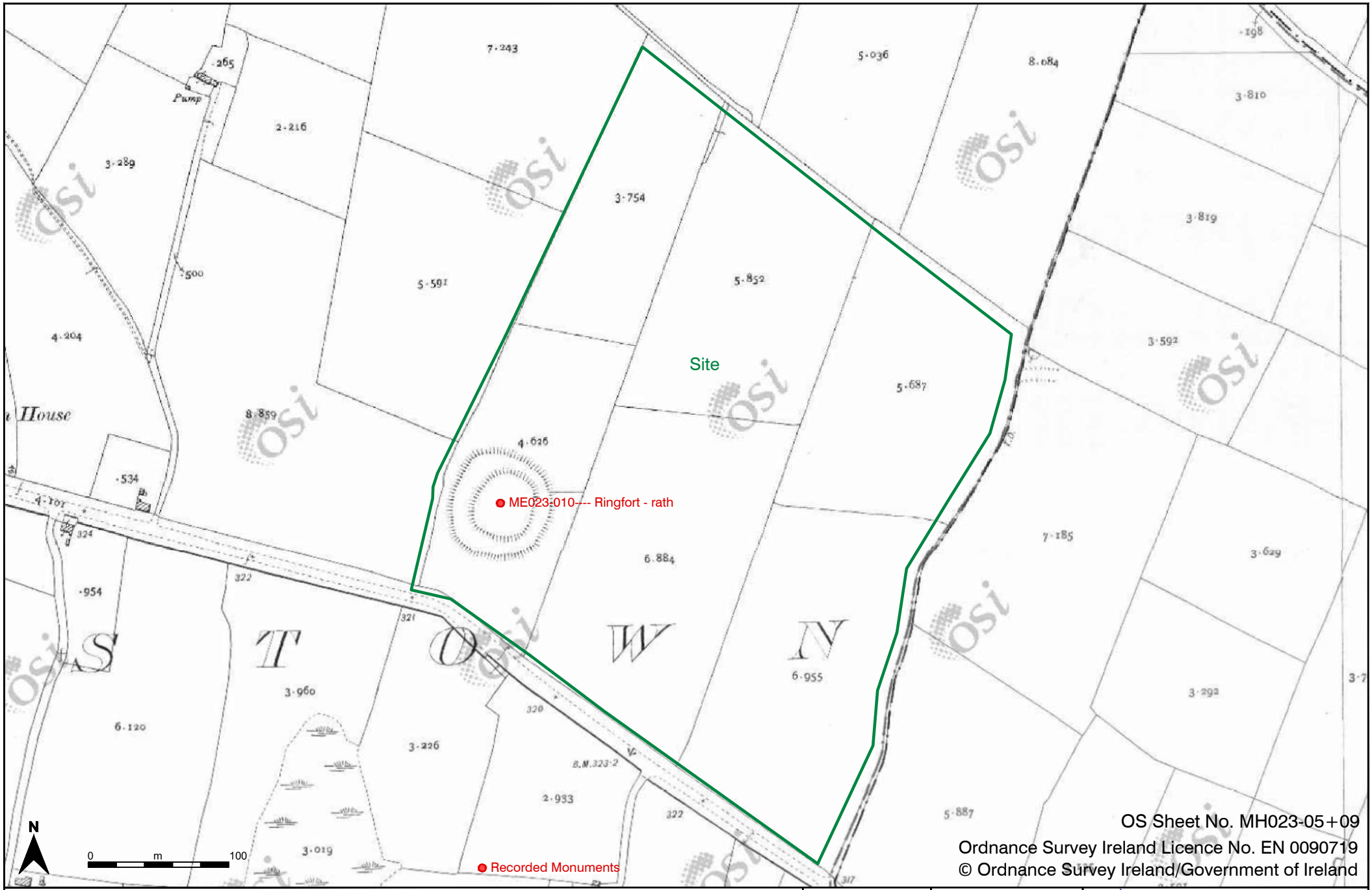


Project Galboystown, Co. Meath		**Date** March 2023	**Drawing No.** 2313_C1002
Figure 2 Location of site and nearby *Sites and Monuments Record* sites			**Scale** 1:8,000 @ A4

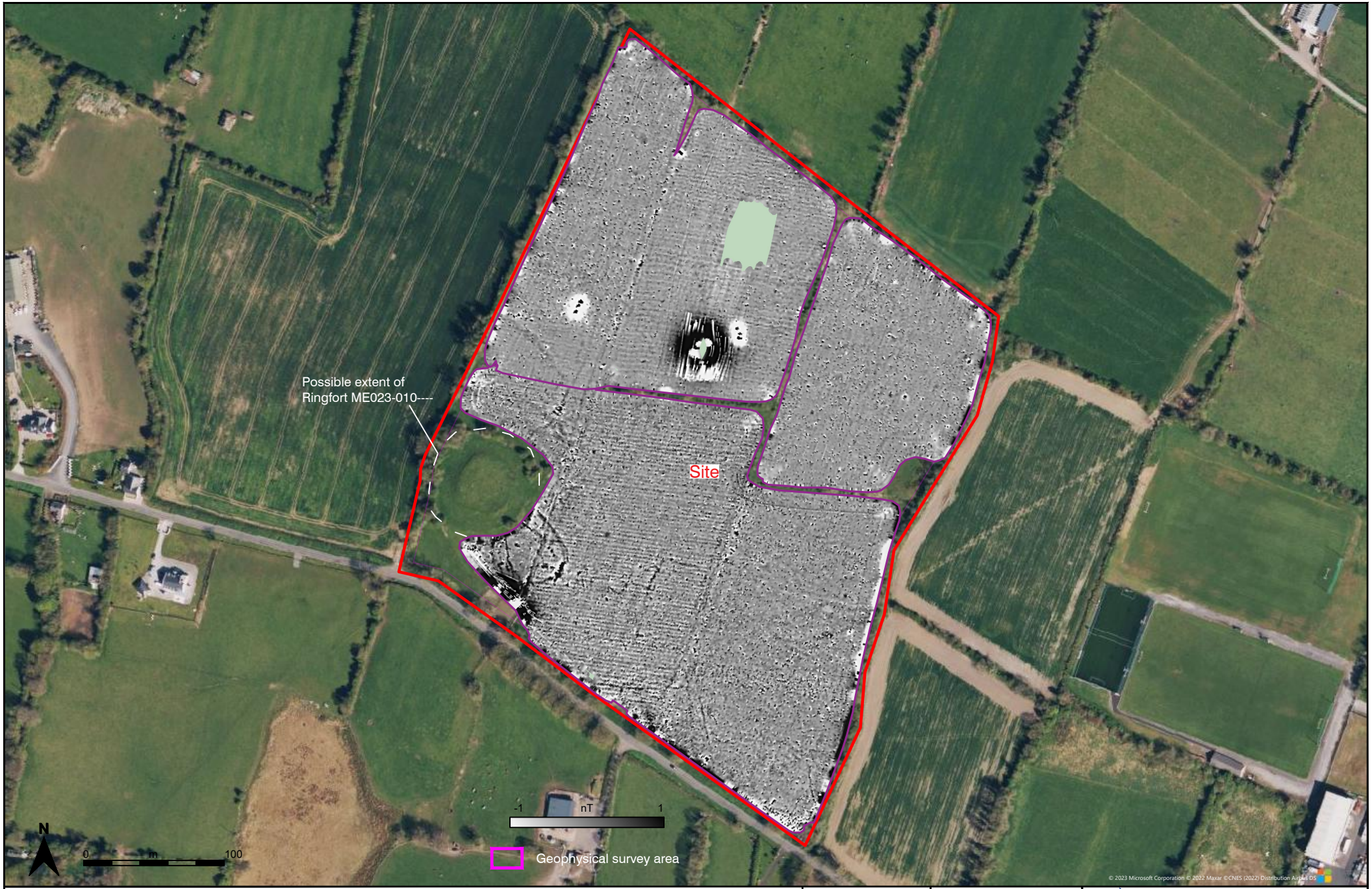
ARCHAEOLOGICAL CONSULTANCY SERVICES UNIT



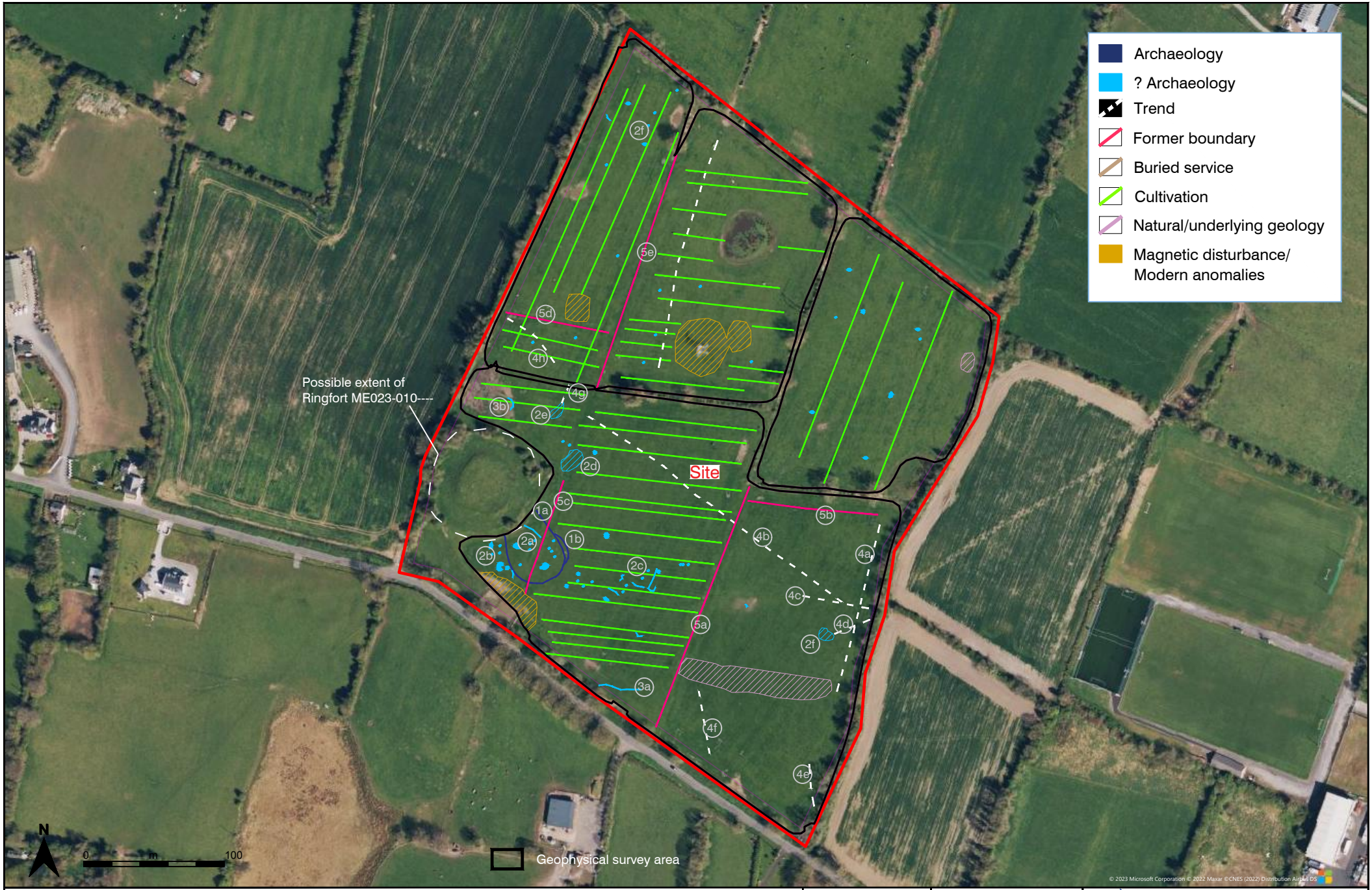
Project Galboystown, Co. Meath	**Date** March 2023	**Drawing No.** 2313_C1003	ARCHAEOLOGICAL CONSULTANCY SERVICES UNIT
Figure 3 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1835 - published 1837), showing location of site		**Scale** 1:3,500 @ A4	



Project Galboystown, Co. Meath	**Date** March 2023	**Drawing No.** 2313_C1004	ARCHAEOLOGICAL CONSULTANCY SERVICES UNIT
Figure 4 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1910 - published 1912), showing location of site		**Scale** 1:3,500 @ A4	



Project Galboystown, Co. Meath	**Date** March 2023	**Drawing No.** 2313_C1005	ARCHAEOLOGICAL CONSULTANCY SERVICES UNIT
Figure 5 Aerial view of site, showing geophysical survey results (greyscale image)		**Scale** 1:3,500 @ A4	



Project Galboystown, Co. Meath	**Date** March 2023	**Drawing No.** 2313_C1006	ARCHAEOLOGICAL CONSULTANCY SERVICES UNIT
Figure 6 Aerial view of site, showing geophysical survey interpretation		**Scale** 1:3,500 @ A4	

Appendix 12.2 Cultural Heritage Assets Gazetteer

EIAR – Volume 3

Knockanarragh Wind Farm

SLR Project No.: 501.V00727.00008

25/01/2024

Cultural Heritage Assets Gazetteer

Table 1: National Monuments within 1km

Entity ID	Asset Description	Scheduled Monument Record Number	Period
WM00515	Castle - unclassified	WM009-004----	Post-Medieval
WM00545	Castle tower house on 1655 Down Survey Map Clonarny Parish	WM009-034001-	Medieval
WM00546	Field syst, poss medieval settlem associated w/ castle	WM009-034002-	Medieval
WM03667	Graveyard	WM009-034003-	Undated
WM00516	Crannog	WM009-005----	Early Medieval
WM00544	Ringfort - unclassified	WM009-033----	Undated
WM00548	Settlement deserted - medieval	WM009-036----	Medieval
WM00549	Earthwork	WM009-037----	Undated - Post-Medieval?
WM00550	Barrow - ring-barrow	WM009-038----	Undated
WM00551	Barrow - mound barrow	WM009-039----	Undated
WM00552	Ringfort - rath	WM009-040----	Undated
WM00525	Ringfort - rath	WM009-014----	Undated - Medieval?
WM00529	Ringfort - unclassified	WM009-018----	Undated - Medieval?
WM00527	Ringfort - unclassified	WM009-016----	Undated - Medieval?
WM00528	Ringfort - rath	WM009-017----	Undated - Medieval?
WM03980	Ecclesiastical enclosure associated with graveyard	WM009-034004-	Undated
ME01102	Ringfort - rath	ME022-029----	Early Medieval
ME01111	Ringfort - rath	ME023-009----	Early Medieval
ME01112	Ringfort - rath	ME023-010----	Early Medieval
ME01113	Moated site	ME023-011----	Medieval

Table 2: National Inventory of Architectural Heritage Assets

Register Number	Name	Period	Cultural Heritage Significance	Asset Type
15306001		1900 - 1920	Regional	water pump
15306002		1800 - 1840	Regional	house
15306003		1800 - 1840	Regional	house
15400902	Ballinlough Castle	1700 - 1837	Regional	demesne walls/gates/railings
15400903	Ballinlough Castle	1700 - 1837	Regional	demesne walls/gates/railings
15400904	Rosmead House	1790 - 1800	Regional	demesne walls/gates/railings
15400916		1840 - 1880	Regional	house
15400917	Snipes Bridge	1780 - 1820	Regional	bridge
15400921	Rosmead House	1700 - 1795	Regional	country house
15400901	Graulty's Bridge	1780 - 1820	Regional	bridge

Appendix 12.3 Site Visit Photograph Gazetteer

EIAR – Volume 3

Knockanarragh Wind Farm

SLR Project No.: 501.V00727.00008

25/01/2024

Photograph 1: (N 61396 64457) View facing northeast toward the Triumphant Arch.

Photograph 2: (N 61666 64656) View northeast along the initial drive to Rosmead House from the Triumphant Arch.

Photograph 3: (N 61854 64830) View northwest toward Rosmead House along the drive.

Photograph 4: (N 61890 65118) View north from Rosmead house toward the wind farm.

Photograph 5: (N 61878 65248) View toward Rosmead House from the north.